

REMARKS

Claims 1-17 are pending in this application, of which claims 1, 5, 9 and 12 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the applicants regard as their invention. Claims 15-17 have been cancelled. New claims 18-25 have been added.

Prior Art Claim Rejections

Claims 1 and 5 stand rejected under 35 U.S.C. §102(b) as being anticipated by Tamura (U.S. 6,177,878).

Independent claims 1 and 5 have been amended to include that:

- (i) the control circuit is arranged in the control unit detachably connected to the meter body,
- (ii) the control unit has a memory to store and rewrite a software program, and
- (iii) the rewritten software program controls the system as a whole and to process the measured data, and the control circuit is operated by the software program.

Claims 3-4 and 7-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tamura (U.S. 6,177,878) in view of Muller (U.S. 6,249,727).

Amended Claims 9 and 12 now include that the control unit detachably mounted on the meter main body via connectors (as shown in FIGS. 4 and 5).

In the present invention, described in independent Claims 1, 5, 9 and 12, the control unit 10 is detachably attached to the meter main body, and the control unit 10 has a memory and a control circuit, the memory storing and rewriting a software program to control the system as a whole and to process the measured data, the control circuit operated by the software program.

Thus, the memory of the control unit can be rewritten for another meter function so that the same control unit can be applied to another vehicle-mounted meter system. This reduces a manufacturing cost and shortens a delivery time of vehicle-mounted meter system, providing an advantage in market competition of the vehicle-mounted meter system. Users can select desirably modifications or functional developments of meter display patterns, improving the vehicle-mounted meter system in quality (as described in Page 16, lines 9-16 of the specification).

The cited references of Tamura and Muller fail to disclose the above-described features (i), (ii), and (iii) of the present invention.

Tamura discloses a detachable electronic component unit 6, but the electronic component unit 6 does not have a memory storing and rewriting a software program to control the system as a whole and to process the measured data. Furthermore, Tamura also has a control portion 2b arranged not in the card but in a meter block 2 unlike the present invention.

Muller discloses a data card 46 can be rewritten in data such as an allowable range of a machine but not to intend to control the system as a whole and to process the measured data. Further, in Muller, a control portion 32 is not arranged in the card but in a meter side unlike the present invention. Therefore, Muller can change numeral values for different vehicles but does not

intend to rewrite a software program, limiting variation in meter design.

Tamura and Muller have their main control parts in their meter sides, so that the meters are limited in design modification because the main control parts are arranged in the meter sides.

On the contrary, the present invention proposes the control circuit arranged in the control unit detachable from the meter, so that a common meter can be applied to applications different in design and control process. Furthermore, a program for the control circuit can be rewritten so as to desirably change the common meter into a customized design by the rewritten software.

Claims 2 and 6 are rejected under 35 USC §103(a) as being unpatentable over Tamura (6,177,878) in view of Goldman et al. (6,430,488).

Claims 2 and 6 depend from independent claims 1 and 5. Independent claims 1 and 5 are now in condition for allowance. Therefore, claims 2 and 6 are allowable by virtue of their dependence from allowable independent claims. Therefore, withdrawal of the rejection of claims 2 and 6 under 35 USC §103(a) as being unpatentable over Tamura (6,177,878) in view of Goldman et al. (6,430,488) is respectfully requested.

New Claims

To further distinguish the present invention over the cited art, new dependent Claims 18-25 have been added. Claims 18, 20, 22 and 24 describe that the control circuit of the control unit includes a micro computer.

Claims 19, 21, 23 and 25 describe that the meter main body if a combination meter having a plurality of meters and a display, and the micro computer controls the plurality of meters and the display.

The newly added claims find support in the specification and no new matter has been added to the application. Allowance of new claims 18-25 is respectfully requested.

Conclusion

In view of the aforementioned amendments and accompanying remarks, claims 1-14, as amended, and newly added claims 18-25 are believed to be patentable and in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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